



ORIGINAL ARTICLE

Level of Social Appearance Anxiety in Individuals with and without Alignment of Teeth

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ABSTRACT

Objective: The aim of this study is to determine the level of social appearance anxiety in individuals with and without alignment of teeth and to demonstrate that orthodontic treatment is effective in reintegrating the individual into society, as well as in improving self-confidence communication skills, and self-esteem.

Methods: The present study included 50 patients (24 males and 26 females) with dental alignment and 50 patients (28 males and 22 females) without dental alignment. The study was performed as an interview study using the Social Appearance Anxiety Scale, which measures emotional, cognitive, and behavioral anxiety felt by the individual due to his/her appearance. Hypotheses were proven by t-test and one-way analysis of variance using the Statistical Package for the Social Sciences program.

Results: The mean level of social appearance anxiety was higher in patients with dental misalignment ($p < 0.05$). The result of t-test analysis revealed no significant difference between the scores of male and female participants ($p > 0.05$).

Conclusion: The level of social appearance anxiety increases in individuals with dental misalignment. However, it is independent from gender.

Keywords: Anxiety, dental alignment, self-esteem

INTRODUCTION

As explained in the studies done until today, people who are physically attractive are more lucky and this charm has become an important condition in different cultures over the years. Most people want to establish communication with attractive individuals. Therefore, individuals endeavor to make an effective impression on other people and to appear attractive. One of these efforts is made for dental appearance, which accounts for a substantial proportion of facial beauty (1,2). The fact that dental health is associated with physical, social, and psychological well-being is increasingly being recognized. Although it has no fatal effect, dental anomalies are known to influence a patient's quality of life and to enhance an individual's anxiety via physical, social, and psychological effects (3).

A regular arrangement of teeth in the mouth and a harmonious face make a substantial contribution to a pleasant and beautiful appearance. An attractive appearance makes life easier and provides numerous opportunities for a balanced psychosocial development. This encourages people to communicate with other people and enhances the sense of being accepted (4). Many diseases manifest with pain and fatigue and threaten health. In such circumstances, they are directly treated. However, orthodontic patients having speech or chewing disorders rarely require urgent treatment. Many patients ask treatment for esthetic concern (2).

Body dysmorphic disorder (BDD) is a syndrome characterized by distress secondary to imagined or minor defects in one's appearance. People with this disorder see themselves as "ugly" and often avoid social expo-

sure to others or turn to plastic surgery to try to improve their appearance. People with BDD commonly suffer from psychological anxiety.

The term psychological anxiety is frequently used also in daily life. The general meaning of psychological anxiety is a multisystem response to a perceived threat or danger. Studies have asserted that facial esthetic is one of the determinants concerning the social and self-acceptability of an individual (5). The present study aimed to measure the level of social appearance anxiety in individuals with and without dental alignment and to underline the necessity of orthodontic treatment.

Study Hypotheses

Opinions concerning social appearance anxiety statistically differ in participants with and without dental alignment. Level of social appearance anxiety does not statistically differ according to gender.

METHODS

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The present study included 50 patients (24 males and 26 females) with dental alignment and 50 patients (28 males and 22 females) with dental misalignment, who were aged over 14 years and referred to Kütahya Oral and Dental Health Center. All of the patients were in permanent dentition and had Class I dentition. This study was approved by the ethical committee on research of Afyon Kocatepe University, Afyon, Turkey. Written informed consent was obtained from all patients or their parents or legal representatives after the procedures had been fully explained to them. The Social Appearance Anxiety Scale (SAAS) consists of 16 items. Emotions or behaviors defined in the scale are responded to as follows according to the severity of these experiences: (1) completely disagree, (2) partly disagree, (3) not sure, (4) partly agree, or (5) completely agree. None of the groups were informed in detail about the study. The participants were asked only to read the instructions about the application of the questionnaire and to mark the description that defined them best. Hypotheses were proven by t-test using the MedCalc 13.0 software program (Medcalc Software bvba, Ostend, Belgium; <http://www.medcalc.org>; 2014).

RESULTS

Overall reliability analysis of the responses given by the participants to the SAAS was assessed by Cronbach's alpha coefficient to test the internal consistency of the scale items and by the test-retest reliability coefficient to test the consistency of the scale across time. The scale consists of 16 items with a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The first item is reversely coded. The other 15 items are straightforward. The scale has no time limit and can be conducted individually and in groups. The scores can be taken from the test ranges between 16 and 80. An increase in SAAS scores indicates an increase in the adolescent's social appearance anxiety. The 16 items of the SAAS are listed in Table 1. An internal consistency of 0.91 was found for the 16 items of the

scale. In the literature, an internal consistency of 0.70 is considered good, and it is considered excellent as it approaches 1.00. Based on this information, the internal consistency found in the present study can be considered good.

The percentage of responses given by the participants with dental misalignment to the question "I get nervous while talking to people because of the appearance of my teeth" is shown in Figure 1. The percentage of responses given by the participants with dental misalignment to the question "I worry that my life will be difficult because of the appearance of my teeth (job application, new friendship)" while I am talking to people is illustrated in Figure 2. The percentage of responses-

Table 1. The 16 items of the Social Appearance Anxiety Scale

1. I feel comfortable with the way I appear to others
2. I feel nervous when having my picture taken
3. I get tense when it is obvious people are looking at me
4. I am concerned people would not like me because of the way I look
5. I worry that others talk about flaws in my appearance when I am not around
6. I am concerned people will find me unappealing because of my appearance
7. I am afraid that people find me unattractive
8. I worry that my appearance will make life more difficult for me
9. I am concerned that I have missed out on opportunities because of my appearance
10. I get nervous when talking to people because of the way I look
11. I feel anxious when other people say something about my appearance
12. I am frequently afraid I would not meet others' standards of how I should look
13. I worry people will judge the way I look negatively
14. I am uncomfortable when I think others are noticing flaws in my appearance
15. I worry that a romantic partner will/would leave me because of my appearance
16. I am concerned that people think I am not good looking

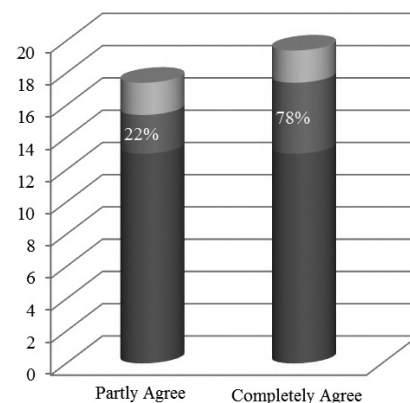


Figure 1. The percentage of responses given by the participants with dental misalignment to the question "I get nervous while talking to people because of appearance of my teeth"

es given by the participants with dental misalignment to the question "List the components among overall facial appearance that affect beauty" is shown in Figure 3. The percentage of responses given by the participants without dental misalignment to the question "List the components among overall fa-

cial appearance that affect beauty" is shown in Figure 4. While the most important component among overall facial appearance that affects beauty was chosen as teeth by participants with dental misalignment, participants without dental misalignment chose eyes.

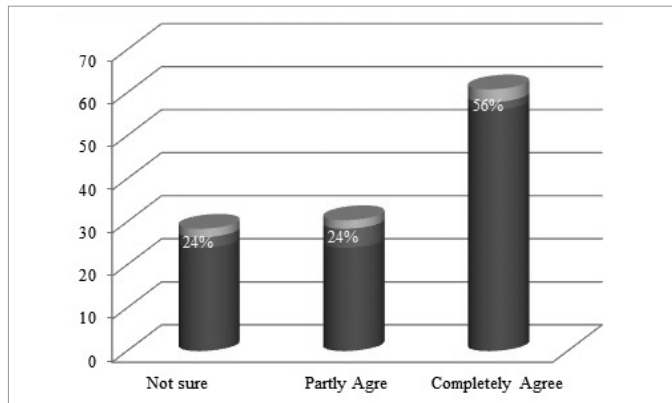


Figure 2. The percentage of responses given by the participants with dental misalignment to the question "I worry that my life will be difficult because of appearance of my teeth"

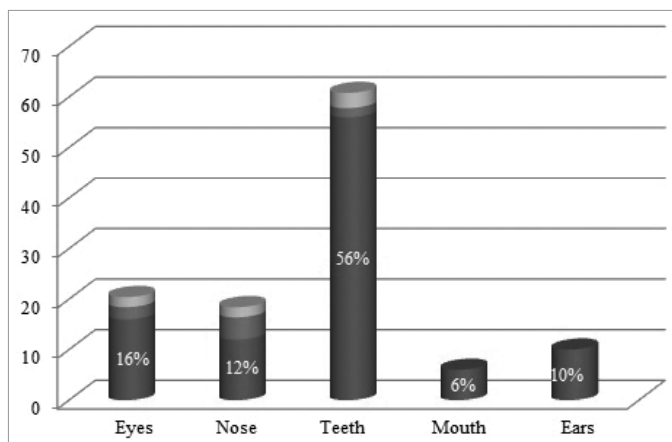


Figure 3. The percentage of responses given by the participants with dental misalignment to the question "List the components among overall facial appearance that affect beauty"

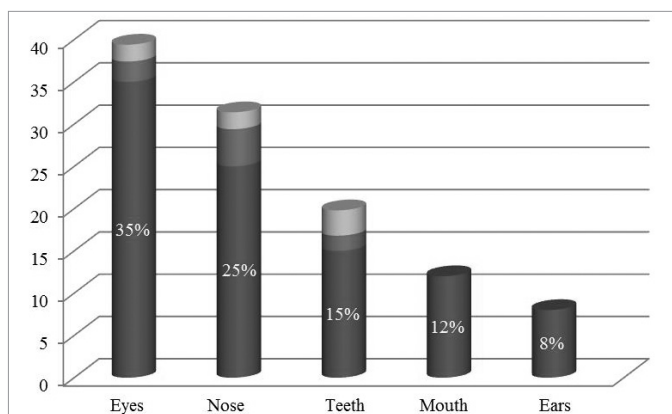


Figure 4. The percentage of responses given by the participants without dental misalignment to the question "List the components among overall facial appearance that affect beauty"

The mean social appearance anxiety levels of the participants with and without dental alignment are demonstrated in Table 2. The mean level was found to be 4.0259 for those with dental misalignment and 2.3447 for those without dental misalignment. The result of t-test analysis revealed a significant difference between the mean scores of the participants with and without dental misalignment ($t=33.415$; $p<0.05$). The mean social appearance anxiety levels of the male and female participants are demonstrated in Table 3; the mean level was found to be 3.2308 for males and 3.1360 for females. The result of t-test analysis revealed no significant difference between the scores of male and female participants ($t=0.535$; $p>0.05$).

DISCUSSION

Social appearance anxiety, which is expressed as a kind of social anxiety, is defined as the anxiety and stress that people feel when their physical appearance is being evaluated by other people. According to Hart et al. (1), social appearance anxiety is a more comprehensive concept including features such as skin color and shape of the face (nose, distance between eyes, smile, presence of dental anomalies, etc.) beyond general physical characteristics such as height, weight, and shape of the eyebrow.

Malocclusion, in brief, is defined as misalignment of teeth and jaws. Esthetic-related demands of patients have been increased particularly for the need of self-esteem. When people first meet, they focus on each other's eyes and lips (i.e., smile) (6,7).

Most of us have something we do not like about our appearance-a crooked nose, an uneven smile, eyes that are too large or too small, or misaligned teeth. However, BDD is an exaggerated thought pattern that leads one to identify flaws in his/her

Table 2. Social appearance anxiety level in the participants with and without dental misalignment

Participants	N	Mean±SD	t	p
With dental misalignment	50	4.0259±0.19856	33.415	0.005
With dental alignment	50	2.3447±0.29520		

SD: standard deviation

Table 3. Social appearance anxiety level in male and female participants

Gender	N	Mean±SD	t	p
Male	52	3.2308±0.87528	0.535	0.737
Female	48	3.1360±0.89401		

SD: standard deviation

physique, real or imagined, and fixate on them in often harmful ways. It takes a lot of work for one to understand and value himself/herself accurately and positively, as he/she must overcome the intrusive thoughts and potentially the comments others have made that have aided in this feeling of inadequacy. Many doctors recommend using a combination of treatments for best results (8,9). Oktan and Şahin (10), Shroff and Thompson (11), Frost and McKelvie (12), and Kostanski and Gullone (13) found a significant negative correlation between negative body image and self-esteem. As can be seen, our findings correspond with the literature.

Spielberg (14) suggested the age of 14 years as the cut-off value for psychological investigations because, according to the author, 14 is the age at which the psychological character of an individual is accepted to have taken form. Therefore, the present study was conducted in individuals aged over 14 years. Fang et al. (5) reported that patients dissatisfied with their facial appearance expressed dissatisfaction mostly with their teeth among other facial components. Moreover, most patients preferred orthodontic treatment at first to change their dentofacial appearance. These results were similar to those observed in both groups included in the present study, suggesting that the appearance of teeth is of great importance.

In the study by Beneet et al. (15), parents who applied for orthodontic treatment for their children reported that treatment would enhance their child's self-esteem. Tungand Kiyak (16) reported that patients who applied for orthodontic treatment expected enhanced self-esteem and oral function rather than a significant change in their overall health at the end of treatment. Philips et al. (17) stated that patients with facial skeletal anomalies had negative emotional conditions such as depression, high anxiety, and personality problems before treatment and thus an enhanced desire for treatment. Van Steenberg et al. (18) reported an association between self-concept and psychological anxiety in patients with dentofacial anomalies, and they stated that poor self-concept led to high psychological anxiety.

This study shows results that allow us to reflect on the relationship between the impact of dental appearance, anxiety, and communication skills and self-esteem in a sample of individuals with and without alignment of teeth. The results of the present study were in line with the results of the study conducted by Van Steenberg et al. (18).

Based on the results of this study, it can be considered that necessity of orthodontic treatment is effective in reintegrating the individual into society, as well as improving self-expression, communication skills, and self-esteem. Patients with dental anomalies would be at more peace with themselves and more successful in self-expression after orthodontic treatment. Orthodontic treatments differ from other dental procedures due to the longer treatment period and higher labor. Thus, the improvements that orthodontic treatments make to an individual's self-esteem are of great importance.

CONCLUSION

According to the results of this study, the following can be concluded:

The level of social appearance anxiety is higher in individuals with dental misalignment.

The level of social appearance anxiety does not differ according to gender.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Afyon Kocatepe University, Afyon, Turkey.

Informed Consent: Written informed consent was obtained from the parents of the patients who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - F.A.S.; Design - M.A.; Supervision - F.A.S.; Resources - M.A.; Materials - M.A.; Data Collection and/or Processing - F.A.S.; Analysis and/or Interpretation - F.A.S.; Literature Search - F.A.S.; Writing Manuscript - F.A.S., M.A.; Critical Review - F.A.S.; Other - F.A.S., M.A.

Conflict of Interest: No conflict of interest was declared by the authors.

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REFERENCES

- Hart TA, Flora DB, Palyo SA, Fresco DM, Holle C, Heimberg, RC. Development and examination of the social appearance anxiety scale. *Assessment* 2008; 15: 48-59. [CrossRef]
- Leary MR, Kowalski RM. The self-presentation model of social phobia. *Diagnosis, assessment and treatment*. Guilford Press: New York, 1995; 94-112.
- Hart EA, Leary MR, Rejeski WJ. The measurement of social physique anxiety. *Journal of Sport and Exercise Psychology*. 1989; 11: 94-104. [CrossRef]
- Shaw WC, Rees G, Dawe M, Charles CR. The influence of dentofacial appearance on the social attractiveness of young adults. *Am J Orthod* 1985; 87: 21-6. [CrossRef]
- Fang A, Sawyer AT, Aderka IM, Hofmann SG. Psychological treatment of social anxiety disorder improves body dysmorphic concerns. *J Anxiety Disord* 2013; 27: 684-91. [CrossRef]
- Havens DC, McNamara JA Jr, Sigler LM, Baccetti. The role of the posed smile in overall facial esthetics. *Angle Orthod* 2010; 80: 322-28. [CrossRef]
- Sarver DM, Ackerman MB. Dynamics smile visualization and quantification: Evaluation of the concept and dynamic records for smile capture. *Am J Orthod Dentofacial Orthop* 2003; 124: 4-12. [CrossRef]
- Sarver DB, Crerand CE. Body dysmorphic disorder and appearance enhancing medical treatments. *Body Image* 2008; 5: 50-8. [CrossRef]
- Fang A, Hofmann SG. Relationship between social anxiety disorder and body dysmorphic disorder. *Clin Psychol Rev* 2010; 30: 1040-8. [CrossRef]
- Oktan V, Şahin M. Kız ergenlerde beden imajı ile benlik saygısı arasındaki ilişkinin incelenmesi. *Uluslararası İnsan Bilimleri Dergisi* 2010; 7: 1-12.

11. Shroff H, Thompson JK. Peer influences, body-image dissatisfaction, eating dysfunction and self esteem in adolescent girls. *J Health Psychol* 2006; 11: 533-51. [\[CrossRef\]](#)
12. Frost J, McKelvie S. Self-esteem and body satisfaction in male and female elementary school, highschool, and university students. *Sex Roles* 2004; 51: 45-54. [\[CrossRef\]](#)
13. Kostanski M, Gullone E. Adolescent body image dissatisfaction: relationships with self-esteem, anxiety, and depression controlling for body mass. *J Child Psychol Psychiatry* 1998; 39: 255-62. [\[CrossRef\]](#)
14. Spielberg G. *Psychological Bulletin* 1978; 3:45
15. Bennett ME, Michaels C, O'Brien K, Weyant R, Phillips C, Vig K. Measuring beliefs about orthodontic treatment: a questionnaire approach. *J Public Health Dent* 1997; 57: 215-23. [\[CrossRef\]](#)
16. Tung AW, Kiyak HA. *Psychological Orthop* 1998; 113:29-39.
17. Phillips C, Broder HL, Bennett ME. Dentofacial disharmony: motivations for seeking treatment. *Int J Adult Orthodon Orthognath Surg* 1997; 12: 7-15.
18. van Steenberg E, Litt MD, Nanda R. Presurgical satisfaction with facial appearance in orthognathic surgery patients. *Am J Orthod Dentofacial Orthop* 1996; 11: 653-9. [\[CrossRef\]](#)